REMARKS/ARGUMENTS

Claims 1, 3, 4, 5, 6, 8, 10, and 11 were rejected under § 102 as being anticipated by Haynes '046. Applicant hereby incorporates by reference each of the arguments previously presented in the prior Responses and therefore asserts that Claim 1 distinguishes over the prior art of record to include the new reference to Haynes '046.

Generally, the Haynes '046 reference discloses a pump arrangement for driving corer sampling tubes into the seabed soil. The pump operates to drive the corer sampling tubes into the seabed, and then operates in a reverse manner or direction to release the corer sampling tubes once the samples have been obtained. Referring to the Figures in the Haynes '046 reference, a pump unit 12 is disposed below a frame 14 that carries a plurality of corers 17. A hydraulic system 28 is used to provide hydraulic power to a piston 26/40 that moves in a reciprocating manner to either bury the pump unit into the seabed soil, or to remove the pump unit once the corers have obtained their core samples. Referring to Figure 2 of the Haynes reference, two sets or pairs of check valves are provided, namely check valves 44, 46, 48, and 50. When the pump unit is to be buried in the seabed soil, water and sediment in cavity 54 are squeezed through check valve 44 into cavity 61 where excess water and sediment exit through the top opening 62. When the corer sampling tubes are to be removed from the sediment, check valves 48 and 50 operate in the reverse direction so that sediment is pumped into cavity 42. A surface vessel tensioning cable 19 is secured to an upper end of the frame 14, and the purpose of the pump in removing the core carrier is to overcome the suction effect as the core carrier is removed from the sediment. The opening 62 at the top of the pump housing is smaller in diameter than the

cylindrical housing 22 so that the core carrier will tend to follow the same path going out of the seafloor that it made while going into the seafloor. It is, therefore, apparent that the purpose of the conical shaped top opening 62 is merely to provide guidance of the pump as it is removed from the seabed floor. The opening 62 is not connected to any other structure of the pump and, based upon the purpose of the opening 62, its guidance function requires that it not be connected to anything else. Claim 1 requires the claimed fluid connection. The Haynes '046 reference clearly has no such connection and the opening 62 cannot be fairly interpreted as such. As also mentioned above with respect to the sediment that gets pumped into the cavity 42, the application of suction in the Haynes device is in the lowermost portion of the device and can only be affected by operation of the piston 26. Therefore, there is no means for retaining seabed soil in the upper portion of the pump in Haynes as required in Claim 1, and to do so would require reconstruction of the reference.

Furthermore, it is apparent that each of the arguments previously presented with respect to the Haynes '721 reference also apply to the Haynes '046 reference and therefore Claim 1 distinguishes over Haynes '046.

Claims 3,4,5 and 6 depend from Claim 1 and therefore should also be found allowable.

It is also noteworthy to discuss dependent Claim 4 and its further distinguishing features as compared to the prior art of record. Claim 4 requires the means for retaining seabed soil having a downwardly reducing external cross-section to minimize resistance to upward movement of seabed soil past the means for retaining seabed soil during embedment of the anchor. As shown in the preferred embodiment of the present invention, this downwardly reducing external cross-section forms a conical hopper. In the Haynes '046 reference, even if

cavities 54 and 61 are interpreted to have a function of retaining seabed soil, it is clear that these cavities have a shape that is opposite to the claimed means for retaining seabed soil having a downwardly reducing external cross-section. As shown best in Figure 2 of the Haynes reference, cavities 54 and 61 have shapes influenced by the presence of the various check valves 44, 46, 48 and 50. Furthermore, the piston 26/40 is especially adapted in shape to mate with the check valves as well as the solenoids 51. This arrangement of the check valves and solenoids therefore dictates that the cavities 54 and 61 actually have a downwardly increasing external cross-section that therefore, with respect to the present invention would actually increase resistance to upward movement of seabed soil. The device in the Haynes '046 reference is not a permanent anchor but rather is simply a pump to displace seabed soil and water, and is not, therefore, intended to be a permanent anchor in which seabed soil is used to maintain the position of the anchor within the seabed. To completely change the shape of cavities 54 and 61 would be to truly destroy the teachings of this reference and to apply impermissible hindsight as to the structure of the claimed anchor of the present invention.

Independent method Claim 8 has been amended to further require that a pump be connected to the fluid connection located at the top wall to cause fluid to be withdrawn away from an upper part of the interior volume during embedment. For example, in the embodiment of Figure 4, a pump 200 is connected to a fluid connection or connector 28 that therefore allows the pump to withdraw fluid away from the upper part of the interior volume during embedment. As explained above with respect to Haynes '046 reference, any type of functionality associated with a pump in Haynes relates to the piston 26 that is actually disposed within the cylindrical housing 22. In other words, the pump unit 12 shown in Haynes comprises pump components

that are disposed within the cylindrical housing 22 whereas in presently amended Claim 8, a seabed anchor is provided along with an external pump. Thus, Claim 8 clearly distinguishes over the Haynes '046 reference.

As noted particularly above with respect to the method of embedding a seabed anchor in the present invention as compared to the method of simply pumping soil and seawater as in the Haynes '046 reference, the Haynes reference simply lacks the claimed structure and function of the present invention. Claims 10 and 11 depend from Independent Claim 8 and, therefore, should also be found to distinguish over the Haynes '046 reference.

Claims 15 and 16 were rejected under § 103 as being unpatentable over Haynes '046 in view of Haynes '721. Applicant hereby incorporates by reference each of its previous arguments provided regarding how the claims distinguish over the Haynes '721 reference. Furthermore, Applicant respectfully disagrees that the teachings of Haynes '721 can be combined with Haynes '046.

The Examiner asserted that it would have been obvious to one of ordinary skill in the art to modify the Haynes '046 reference to include a gravity base as taught by Haynes '721 in order to provide support for appropriate offshore structure. As previously mentioned, with respect to the embodiment shown in Figure 3 of Haynes '721, a cluster-pile platform 33 is shown where a pump assembly 35 is attached to the top of a pile 37. The pile 37 is simply a cylindrical tube. Even if the pump 35 is construed to correspond to the claimed top wall, this embodiment clearly has no means for retaining seabed soil. Furthermore, there is no teaching or suggestion within this reference that the various components of the embodiments should be substituted in other embodiments. As also mentioned above, the Haynes '046 reference discloses a core carrier

wherein corers are mounted to a frame, and the pump unit 12 is used as the motive force to bury the corers within the seabed. Providing a plurality of corers in Haynes has no basis in the disclosure of the Haynes '721 reference since the Haynes '046 reference has nothing to do with bearing caissons set within a gravity base. Even if the gravity base of the Haynes '721 reference was somehow combined to the teachings of the Haynes '046 reference, this combination still does not address the significant deficiencies in the '721 reference wherein the pile 37 is simply a cylindrical tube, and there is clearly no means for retaining seabed soil within the caisson. Therefore, this rejection under § 103 should be withdrawn.

New dependent Claim 17 has been added that claims the fluid connection disposed on the top wall and the pump. For the same reasons as set forth above with respect to the amendment made to Claim 8, Claim 17 should also be allowed

The application now appearing to be in form for allowance, early notification of the same is respectfully requested. The Examiner is invited to contact the undersigned by telephone if doing so would expedite the resolution of this case.

Respectfully submitted,

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Date: October 5, 2007